

Crystal J. Sun

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Education

MASTER IN PUBLIC HEALTH (M.P.H.) | 2012-2013 | UNIVERSITY OF BRITISH COLUMBIA

- Major: Health Promotion and Epidemiology
- GPA: 4.33/4.33
- Related coursework: SPPH 400 - Statistics in Health Research, SPPH 502 - Epidemiological Methods I, SPPH 524 - Core Biological Concepts of Public Health Practice, SPPH 525 - Issues and Concepts in Public Health, SPPH 500 - Analytical Methods in Epidemiology, SPPH 503 - Epidemiological Methods II, SPPH 526 - Leadership in Public Health, SPPH 540 - Program Planning and Evaluation

BACHELOR OF SCIENCE (B.SC.) | 2007-2011 | UNIVERSITY OF BRITISH COLUMBIA

- Major: Integrated Science in Microbiology, Immunology and Environmental Science
- GPA: 3.80/4.33
- ScienceOne Program
 - Rigorous and intensive first year Science program for those that excelled in the Sciences in high school
- Co-operative Education Program

Skills & Abilities

Qualitative & Quantitative Research/Program Planning & Evaluation/Systematic Reviews/Epidemiological Methods/Critical Appraisal/Literature Review/Manuscript Writing

SOFTWARE	R, SPSS, SAS (rudimentary), RefWorks, Mendeley, MS Office Word, Excel, PowerPoint Outlook, Visio, LotusNotes, Adobe CS Photoshop, Photoscape
DATABASES	PubMed, SCOPUS, OVIDSP, EMBASE, TRID
INTERNET	Facebook, Twitter, WordPress, SurveyMonkey, FluidSurvey, BlogSpot, Blogger
LANGUAGES	English (native), Mandarin Chinese (fluent), Japanese (limited working)

Academic Awards & Distinctions

Semi-Finalist at Poster Competition, AUTO 21 Centre of Excellence	2013
AUTO 21 Highly Qualified People (HQP), AUTO 21 Centre of Excellence	2013
MPH Graduate Entrance Scholarship, University of British Columbia	2012
Dean's Honors List, University of British Columbia	2008-2009
The Duke of Edinburgh Bronze Award, Duke of Edinburgh BC/Yukon Chapter	2009
President's Entrance Scholarship, University of British Columbia	2007-2008
B.C. Provincial Scholarship, BC Ministry of Education	2007

Research Experience

STUDENT EPIDEMIOLOGIST **MAY 2013 – SEPTEMBER 2013** **Public Health Agency of Canada, Chronic Disease Surveillance and Monitoring Division | Ottawa, ON**

- Conducted a comprehensive literature review of existing objective measures of physical activity guidelines (e.g., in terms of steps needed to take per day) for different Canadian populations including children, youth, adults and those with disabilities using online databases (PubMed, SCOPUS, OVIDSP, CINAHL etc.).

- Analyzed and interpreted Canadian Health Measures Survey (CHMS) data on physical activity (self-report and through an accelerometer) using SPSS and the Data Analysis Information System (DAIS).
- Helped to inform and develop a new national physical activity guideline using pedometer and/or accelerometer data.
- Developed a SAS code to aid in future analysis of CHMS data.
- Presented findings at departmental meetings and managed discussions.

MANUSCRIPT WRITER

OCTOBER 2012 – APRIL 2013

Child and Family Research Institute | Vancouver, BC

- Co-authored two papers for publication:
 - “Evaluation of the methodological quality of systematic reviews on child safety seat promotion interventions”
 - “Primary prevention of whiplash injuries – a review”
- Other responsibilities include writing research proposals and competing ethics applications to UBC ethics.
- Presented supervisor’s findings at the annual AUTO21 conference titled “Regional observational study on head restraint usage in BC”.

RESEARCH ASSISTANT

MAY 2011 – SEPTEMBER 2011

G.F. Strong Rehabilitation Centre| Vancouver, BC

- Assisted in research-related activities for the Spinal Cord Injury Rehabilitation Evidence (SCIRE) project (2011) and for advisor’s academic research.
- Responsibilities included conducting literature searches on spinal cord injury rehabilitation evidence, summarizing and critically reviewing existing scientific literature on a broad range of topics in spinal cord injury rehabilitation, rating relevant articles using the PEDro and the Downs and Black’s scale and summarizing articles using the PICO (population, intervention, control and outcome).

EPIDEMIOLOGY RESEARCH ASSISTANT

JANURARY 2011 – MAY 2011

B.C. Centre for Disease Control| Vancouver, BC

- Compiled the 2010 Antimicrobial Resistance Trends in the Province of British Columbia report (published on the BCCDC website) under the supervision of the director of communicable disease team, David Patrick (now director of the School of Population and Public Health at UBC).
- Duties included performing statistical analysis and interpretation of data using MS Excel and SPSS, performing thorough data collection and database management, acquiring the most up-to-date data and information on antimicrobial resistance and utilization, assembling in house data, accessing online databases, communicating with key stakeholders, and correlating trends in antibiotic resistance with antibiotic utilization.

RESEARCH ASSISTANT

MAY 2008 – DECEMBER 2008

B.C. SPCA| Vancouver, BC

- Assisted in advisor’s dog personality research by assessing dog behaviours before and after adoption through questionnaires. Duties included data collection, data entry, database maintenance and data analysis using SPSS.

Related Professional Experience

RESEARCH ANALYST

JANUARY 2012 – APRIL 2012

Futura Engineering Inc. | Vancouver, BC

- Researched current anaerobic and aerobic composting techniques and devised an experiment to test whether such techniques can be used to accelerate the composting process.

ENVIRONMENTAL/CHEMICAL ANALYST

JANUARY 2011 – DECEMBER 2011

Kemetco Research Inc. | Richmond, BC

- Analyzed the biological oxygen demand (BOD), total nitrogen (TN), ammonia (NH₃), chlorine (Cl), specific gravity and acidity of different water samples, operated the IC/GC/HPLC to detect trace ions within samples, assembled progress reports and communicated effectively with clients.

Publication and Papers

“Antimicrobial Resistance Trends in the Province of British Columbia - 2010”. British Columbia Centre for Disease Control. (2011). <<http://www.bccdc.ca/NR/rdonlyres/4F04BB9C-A670-4A35-A236-CE8F494D51A3/0/2010AntimicrobialResistanceTrendsInBCJuly2011.pdf>>.

Sun, C., Khuu, T., Samels, D., Cameron, B., and Sheikh, A. “Implementing a Food Scrap Composting Program for Multi-unit Dwellings in Downtown Vancouver, British Columbia”. (2012). <<http://circle.ubc.ca/handle/2429/42316>>.

Manuscript in Progress:

Sun, C.J., Desapriya, E, Harjee R. “Evaluation of the Methodological Quality of Systematic Reviews on Child Occupant Injury Prevention through Child Safety Seat Use Promotion Interventions.” International Journal of Pediatrics (2012). *Under review.*

Conference Presentations

Sun, C.J., Ranatunga, Y., Owen, D., Douglas, R.P., White, M., Desapriya, E. “Regional observational study on head restraint usage in British Columbia”. AUTO 21 Centre of Excellence Poster Competition.

- Advanced to the semi-finals (only 12/80 posters advanced to the semi-finals).

Service to Community

STUDY BUDDY TUTOR

APRIL 2011 – OCTOBER 2012

Big Sisters of Lower Mainland | Vancouver, BC

- Nurtured the self-esteem of a Little Sister by offering her educational support and academic assistance as a mentor and tutor.
- Encouraged my Little Sister to improve her educational performance and meet cooperatively defined academic goals.

DAYCARE ASSISTANT

MAY 2009 – MAY 2010

UBC Childcare Services | Vancouver, BC

- Assisted in the daily activities of the Little Raven Daycare Centre and cared for children aged 3-5.

ICE CREAM SOCIAL ASSISTANT

MARCH 2006 – JUNE 2009

Arbutus Care Centre | Vancouver, BC

- Assisted elders at the Care Centre via one-on-one visits. Assisted in the ice cream social program.

Relevant School Papers

Intervention Program Planning:

Preventing HIV and HCV Transmission in Female Inmates in BC

- Completed as a part of an interprofessional team for IHHS 410 (Improving Public Health course).
- Outlined the major steps, including performance, learning and change objectives needed to develop a strategic plan for the intervention.
- Outlined the details of the three components of the intervention (health information pamphlet, needle exchange machine and testing) reflecting scientific, political, practical, economic, cultural and ethical considerations.
- Delineated specific issues in adoption, implementation and maintenance to assure success of the intervention.

Policy Brief Paper:

Addressing Access to ART in Resource-limited Settings in South Africa

- Summarized the evidence linking delayed access to ART to increased risk of HIV-associated TB mortality and provided additional policies and recommendations to address the issue of access to ART in resource limited settings.

Critical Appraisal Paper:

Is Night Shiftwork Associated with an Increased Risk of Breast Cancer in Women?

- Formulated research question using the PICO framework.
- Analyzed epidemiological evidence from three major papers in this field, critically appraised the papers and used knowledge learned from literature search on this topic and assessment of three selected studies to provide insight on this research question.

Literature Review Paper:

Analysis of the Molecular Pathogenesis of HPV and Discussion of the Developmental Background of HPV Vaccine

- Completed as an individual literature research project in the ScienceOne program (a rigorous and innovative first-year undergraduate Science program in which Biology, Chemistry, Mathematics and Physics are taught with a strong focus on the connections between these traditional disciplines).
- The paper investigated the molecular pathogenesis of HPV, including the regulation of the oncogene expression in differentiating epithelia, the life cycle of virus and the connection between the pathogenesis of the virus to cervical cancer.
- The paper also discussed available vaccines, their developmental procedures and their effectiveness to date.

Clubs and Memberships

Emerging Health Leaders (**Member**, 2013)

Golden Key International Honors Society (**Member**, 2008-2010)

Stepping Bridge (**Academic Director**, 2009-2010)

World Vision UBC (**Events Coordinator**, 2009-2010)

Earth Project for the Judith Marcuse World Urban Forum (**Youth Advisory Committee Member**, 2008)

Workshops

Information Management

Foundations of project management I/II

Manuscript Writing

SAS

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Health Canada Workshop, 2013

Graduate Pathways to Success Program (GPS UBC), 2013

Graduate Pathways to Success Program (GPS UBC), 2012

University of British Columbia, 2012

University of British Columbia, 2012

Hobbies and Interest

Piano (RCM Grade 8 Level), Swimming, Jogging

Design, Photography, Travelling ☺